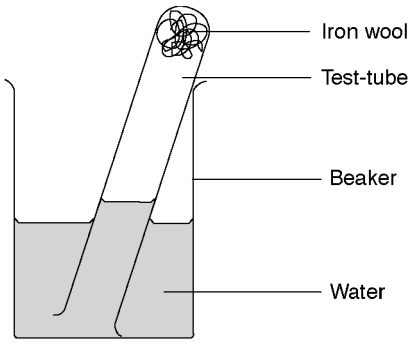
IGCSE chemistry section 2 d

HOW MUCH AIR IS USED DURING RUSTING

Introduction

This experiment illustrates how much of the air is used in the rusting process. It is the oxygen component of air which reacts in the rusting process. This experiment allows calculation of the percentage of oxygen in the air.



What to record

Initial length of column of air
Final length of column of air in the tube

What to do

1. Place approximately 3 cm depth of iron wool in the bottom of a test-tube. Wet the iron wool with water.
2. Invert the test-tube in a beaker of water (approximately 20 cm^3).
3. Measure the length of the column of air.
4. Leave the test-tube for at least one week, and then measure the new length of the column of air. Take care not to lift the test-tube out of the water.

Questions

1. Write a word equation for this reaction.
2. Calculate the percentage of oxygen in air.
3. How could it be shown that the reaction is complete?